

REMARKS

In the Office Action of September 1, 2005, claims 6, 7 and 9-16 were rejected under 35 U.S.C. 102(e) as anticipated by Yong et al. (U.S. Patent No. 6,844,631). Claims 8 and 17 were rejected under 35 U.S.C. 103(a) as obvious over Yong et al.

Applicants would like to thank the Examiner for his assistance in a telephone interview on February 27, 2006. The claims were discussed with particular reference to the applicants' Fig. 4 and Yong's Figs. 2 and 3.

Claim 6 recites an integrated circuit device comprising a semiconductor substrate, a plurality of metal layers on the substrate and a plurality of bonding pads on top of the metal layers. This structure is illustrated in Fig. 4 of the application where the semiconductor substrate is 410, the metal layers are numbered M1 through M9 and the bonding pad is 345. As shown in Fig. 4, each bonding pad has a bonding area located above a region 370 where each of the metal layers overlap and an elongated probing area 380 located above a subset of the metal layers. As indicated in the specification at page 10, lines 15-23, the full set of metal layers M1-M9 under the bonding area is used to sustain the pressure caused by bonding equipment. However, as indicated at page 10, lines 23-25, a smaller number of metal layers can be used under the probing area because the wafer probing pressure is significantly smaller. Indeed, only five metal layers M2, M3, M7, M8, M9 are shown under probing area 380 in applicants' Fig. 4.

In rejecting claim 6, the Examiner asserts that Fig. 3 (also Fig. 2) of Yong et al. discloses a semiconductor substrate 26, a plurality of metal layers 28, 30, 32, a bonding area 12 and an elongated probing area 14. Contrary to the Examiner's assertion, however, the '631 patent does not disclose a structure in which the probing area is located above a subset of the metal layers. While the Examiner has correctly identified the metal layers of the semiconductor device of Figs. 2 and 3 of the '631 patent as layers 28, 30 and 32, inspection

of Figs. 2 and 3 reveals that each of these layers is located beneath both probing area 14/47 and bonding area 12/48.

In his response to applicants' arguments at paragraph 3 of the Office Action of September 1, 2005, the Examiner maintains that Yong et al. discloses a probing area having a subset of metal layers having different conductive paths on the left-hand side (under the probing area) than the conductive paths on the right-hand side (under the bonding area) of Fig. 3. This, however, misses the point. Claim 6 specifies that the bonding area is located above a region where each of the metal layers overlap while the probing area is located above a subset of the metal layers. The metal layers in Yong et al. have been correctly identified as layers 28, 30, 32. Inspection of Figs. 2 and 3 of Yong et al. reveal that each of these layers overlap both under the bonding area and under the probing area. Thus, Yong et al. does not disclose applicants' claimed structure in which only a subset of the metal layers is located under the probing area.

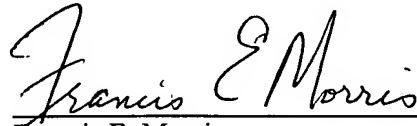
Since a claim is not anticipated by a reference that does not disclose each element of the claim, the rejection of claim 6 as anticipated by Yong et al. should be withdrawn. Likewise, the rejection of dependent claims 7-10 as anticipated by Yong et al. should be withdrawn.

Claim 11 has been amended to add to the claim a recitation similar to that of claim 6 specifying that the bonding area is located above a region where all the metal layers overlap while the probing area is located above a region where less than all the metal layers overlap. Since the '631 patent does not disclose each of the elements of amended claim 11, the rejection of claims 11-16 as anticipated by the '631 patent must be withdrawn. Claim 17 is believed patentable for the same reason claim 11 is patentable.

For the foregoing reasons, the claims of this application are believed to be patentable and the application is believed to be in condition for allowance. Such action is respectfully

requested. If the Examiner believes a telephone interview would expedite prosecution of this application, he is invited to call Applicants' attorney at the number given below.

Respectfully submitted,

A handwritten signature in cursive script that reads "Francis E. Morris". The signature is written in black ink and is positioned above a horizontal line.

Date: March 1, 2006

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